

Panama Canal

The Panama Canal, an artificial waterway across the Isthmus of Panama in Central America, connects the Atlantic and the Pacific oceans. It trends north-south, and the Pacific terminus is to the east of the Atlantic end. The canal, completed in 1914, belongs to the U.S. government. At the time of its opening it was universally acknowledged as the greatest engineering feat of the modern age, and it is still so regarded by many observers. The passage through this waterway shortens the trip from the Atlantic to the Pacific by 11,270 km (7,000 mi). During both world wars the canal had great strategic importance.

Description

The total length of the canal is 64 km (40 mi) from shoreline to shoreline and 82 km (51 mi) from deep water in the Caribbean to deep water in the Pacific. The maximum width is about 90 m (300 ft), and the minimum depth is 12 m (41 ft). The canal has six pairs of locks, with concrete chambers 305 m (1,000 ft) long and 34 m (110 ft) wide. Cristobal is its Atlantic terminus, and Balboa, its Pacific.

On the Atlantic side, three flights of the Gatun Locks raise the water level to 26 m (85 ft) at Gatun Lake, which was created by damming the Chagres River. After traversing the Gatun Lake, a distance of 40 km (25 mi), the canal route crosses the Continental Divide in the 13-km-long (8-mi) Gaillard Cut (formerly the Culebra Cut). The Pedro Miguel Locks then bring the level of the canal to that of Miraflores Lake, 16 m (54 ft) high. Finally, two sets of Miraflores Locks lower the water to the sea level of the Pacific. The transit takes 7 to 8 hours.

The canal was a commercial success from the time of its opening, but it is unable to accommodate modern bulk tankers and supertankers. Work to widen the Gaillard Cut was begun in January 1991 and will permit oceangoing vessels to pass en route. By that year, however, traffic had been declining for several years, from more than 12,000 transits and 156.9 billion metric tons (173 billion U.S. tons) in 1988.

History

The idea of an artificial waterway connecting the Atlantic and the Pacific dates from the early 16th century. Not until the second half of the 19th century, however, was a technology developed to accomplish such a task. In 1878 a French company won from Colombia (of which Panama was then a part) the concession for building a sea-level canal through the isthmus. The company was headed by Ferdinand de LESSEPS, builder of the Suez Canal. Work began in 1881, but malaria, yellow fever, and treacherous terrain convinced most engineers that a sea-level canal could not be built. The company went bankrupt, and work on the canal ceased in 1887.

In 1902, after prolonged negotiations (in which Philippe BUNAU-VARILLA played a prominent role), the United States bought out the French interests and began talks with Colombia for the rights to build a canal. Because Colombia proved intransigent, the United States gave its tacit support to a rebellion in Panama. After the rebels declared Panama independent in 1903, President Theodore Roosevelt immediately recognized the new republic, and within two weeks the United States had the agreement it wanted: the Hay-Bunau-Varilla Treaty (see also HAY-PAUNCEFOTE TREATY).

The treaty called for the creation of the Panama Canal Zone under the complete control of the United States "in perpetuity." In return, the United States agreed to pay Panama \$10 million and annual rent of \$250,000. (The amount was increased several times; by 1979 it was \$2,328,000.)

Work on the canal began in 1904 and continued for 10 years. The idea of a sea-level waterway was abandoned, and a lock canal was designed. Dr. William C. Gorgas succeeded in ridding the area of malaria and yellow fever. George Washington GOETHALS, appointed chief engineer in 1907 by President Roosevelt, is generally credited with the success of the project. As many as 40,000 workers at one time were employed at the construction site. The cost of the canal was \$336,650,000.

Panama Canal Accords of 1978 and Later Developments

Despite the liberalization of the Hay-Bunau-Varilla Treaty over the years, the U.S. presence was regarded by Panama as imperialistic. Negotiations for a new treaty began in the 1950s but were not completed until 1977, when Panamanian voters approved two accords: the Panama Canal Neutrality Treaty, which guaranteed the canal's neutrality after the year 2000, and the Panama Canal Treaty, which stipulated that the United States would operate the canal, with increasing Panamanian participation, until Panama assumed legal control in 2000. The

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treaties were ratified by the U.S. Senate in 1978, and the U.S.-Panamanian Panama Canal Commission took over operation of the canal in October 1979. By 1990, when a Panamanian became head of the commission, more than 80% of the canal's employees were Panamanian.

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